UNIVERSITY OF JOHANNESBURG

FACULTY OF ECONOMIC AND FINANCIAL SCIENCES

DEPARTMENT OF ECONOMICS AND ECONOMETRICS

SUBJECT	ECONOMICS 3A (ECO33A3)	**DATE:** 7 June 2016
CAMPUS	SWC	**TIME:** 08h30-11h30 (3 Hours)
ASSESSMENT	FINAL EXAM	**MARKS:** 180
EXAMINER	MR. T. GOPANE	**PAGES:** 4

ERNAL MODERATOR: MS M. WILSON
EXTERNAL MODERATOR: PROF T. GWATIDZO

SURNAME AND INITIALS _____

STUDENT NUMBER _____

CONTACT NUMBER _____

INSTRUCTIONS:

1. Use mark allocation as a guide to what is required.
2. Round your final answers to two decimal places.
3. Answer all questions.
4. Non-programmable calculators are permitted.
5. You are not allowed to use cell phone as a calculator.
5. It is in your interest to show all workings.
6. Label all diagrams and graphs.
7. Write neatly.

1. National Income Accounting.
   A nation's economic activity is normally quantified through a System of National Account (SNA) with identities, such Y=C+I+G+X-M. Listed below are definitions of different measures or variations of SNA identities. For each definition, you are required to name the identity, and then state its equation. **[15]**

   a.) Total value of aggregate spending on final goods and services by households, business entities, and government, in a country in a particular year or quarter. (3)

   b.) Total value of all final goods and services produced within the borders of a country within a particular period, usually a year or quarter. (3)

   c.) The sum of value added by all resident producers plus any product taxes (minus subsidies) not included in the valuation of output plus net receipts of primary income from abroad, in a particular period, usually a year or quarter. (3)

   d.) The total value of all final goods and services produced by a country's factors of production in a particular period, usually a year or quarter. (3)

   e.) The total value of all final goods and services produced by a country's factors of production, adjusted for depreciation, in a particular period, usually a year or quarter. (3)

2. In order to demonstrate your understanding of the relevant economic theories, you are required to give a brief definition of the economic terms or concepts which are listed below. **[15]**

   a.) Exchange rate pass-through (3)
   b.) J-curve (3)
   c.) Yield curve (3)
   d.) Liquidity trap (3)
   e.) Long run neutrality of money (3)

3. You are required to answer the following questions: **[35]**

   a.) Derive and interpret the DD Curve. (10)

   b.) Draw a labelled graphical diagram for each of the following economic scenarios and then state the results of your analysis in brief:
      i.) The effect of a permanent fiscal expansion under flexible exchange rate. (10)
      ii.) The effects of fiscal expansion under fixed exchange rate. (10)
   c.) Based on your analysis in (b) above, which policy option do you recommend and why? (5)

4. You are required to answer the following questions: **[20]**
   a.) "Exchange rate and the foreign exchange market: *an asset approach"*. What is the meaning of this statement? (5)
   b.) You are required to show that, the *Interest Parity Equation*, (5)

$$R_d = R_f + \frac{E^e{}_{d/f} - E_{d/f}}{E_{d/f}} \qquad E4.1$$

   can be written as:

$$E_{d/f} = \frac{E^e{}_{d/f}}{R_d - R_f + 1} \qquad E4.2$$

   c.) Use E4.2 to determine the change in the current exchange rate $\left(E_{d/f}\right)$, that results from an increase in domestic interest rate, R_d, other things equal. Use chain rule to demonstrate your solution. (10)

5. *Long-Run Exchange Rate Model based on Purchasing Power Parity* may be presented with equations, E5.1 to E5.3. You are required to analyse the effect of an increase in domestic interest rate (R_d) on current exchange rate ($E_{d/f}$), other things equal. Use chain rule to demonstrate your solution. **[15]**

$$E_{d/f} = \frac{P_d}{P_f} \qquad E5.1$$

$$P_d = \frac{M^s{}_d}{L(R_d, Y_d)} \qquad E5.2$$

$$P_f = \frac{M^s{}_f}{L(R_f, Y_f)} \qquad E5.3$$

6. Compare your solutions for questions 4 and 5, and then answer the following questions: **[10]**
   a.) Are your answers for question 4(c) and question 5 the same?. Explain your answer. (5).
   b.) Would you recommend the two models, Interest Parity Model, and Long Run Exchange Model based on PPP to be used to predict current exchange rate? Motivate your answer. (5)

7. You are required to answer the following questions: **[15]**
   a.) Draw a labelled diagram to demonstrate simultaneous equilibrium in the asset market (foreign exchange and money markets). (7)
   b.) Use your diagram above to illustrate the effect of an increase in domestic output (Y_d) on current exchange rate ($E_{d/f}$), other things equal. (8)

8. Study the table below and then answer the questions that follow: **[25]**

	Domestic Interest Rate $\mathbf{R_d}$	Foreign Interest Rate $\mathbf{R_f}$	Expected Rate of Domestic Currency Depreciation against Foreign Currency.
CASE	$\mathbf{R_d}$	$\mathbf{R_f}$	$\frac{E_{d/f} - E_{d/f}}{E_{d/f}}$
Case1	0.1	0.06	0.00
Case2	0.1	0.06	0.04
Case3	0.1	0.12	-0.04

a.) State the equation for Uncovered Interest Parity Condition. (3)
b.) Interpret the Interest Parity Condition (3)
c.) In each of the cases (1 to 3) in the above Table, state whether Equilibrium holds, or Equilibrium does not hold, and then confirm your answer with appropriate computation.
   i.) Case 1 (3)
   ii.) Case 2 (3)
   iii.) Case 3 (3)
d.) Draw graphical diagram that represents Case 1, and then give an economic intuition of how equilibrium is restored, if equilibrium does not hold. (10)

9. Study the Table below and then answer the questions that follow: **[25]**

	Consumer Price Index (Price Level)	
Country	**2014**	**2015**
South Africa (domestic)	200	250
Botswana (foreign)	300	350

a.) Compute inflation rate for South Africa (π_{d2}) for the period, 2014 to 2015. (5)
b.) Compute inflation rate for Botswana (π_{f2}) for the period, 2014 to 2015. (5)
c.) Based on your answers above, and the Relative PPP, what is the expected exchange rate between South Africa and Botswana in 2015? Show your computations. (5)
d.) Use the information in the table to compute the implied exchange rate between South Africa and Botswana using the Absolute PPP. (5)
e.) Are your answers in (c) and (d) the same? Which answer would you recommend, and why? (5)

10. Currency triangular arbitrage. You are required to study the table below and then answer the questions that follow. **[10]**

	Euro (€)	**Pound Sterling (£)**
Dollar ($)	1.2	1.8

a.) You are required to compute $\mathbf{E_{€/£}}$. (5)
b.) Based on you computation above in (a), you are required to confirm whether triangular currency arbitrage exist or not. Motivate your answer. (5)

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